

Why the MX Missile Is Not the Answer

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THE DEPLOYMENT OF MISSILES with very accurate multiple warheads (MIRVs) appears to have permanently deprived opposing land-based intercontinental ballistic missiles (ICBMs) of the assurance that they would survive an attack.

So to preserve America's land-based missile capability in the face of Soviet MIRV deployment, the Carter administration has proposed a \$30 billion mobile MX missile program (M for missile, X for experimental). The plan calls for putting in place 200 mobile missiles at widely separated sites, each of which would have as many as 25 shelters. The missiles would be moved from one shelter to another at random. This, it is felt by the planners, would complicate, if not prevent, any Soviet attempt to destroy U.S. ICBMs in a pre-emptive strike.

But the MX is an inappropriate response to the problem.

In the first place, its deployment as currently proposed assumes that the Soviet Union would continue to limit the number of its warheads after the expiration of the SALT II treaty in 1985. If the U.S.S.R. were to respond to MX deployment by increasing the number of its warheads, it could defeat the proposed multiple-shelter scheme for each of 200 MX missiles simply by attacking all the shelters simultaneously. To make the shelters as protective as those for our current Minuteman ICBMs would be prohibitively costly; it also would invite the U.S.S.R. to set up a similar system, presenting serious new problems of verification for U.S. reconnaissance systems.

The remaining choices for the United States are to learn how to live with land-based ICBMs that have some degree of vulnerability, to abandon land-based MIRVed missiles altogether or to limit all new ICBM deployment to specially equipped aircraft and submarines.

Short-takeoff-and-landing (STOL) aircraft, for example, appear to offer better missile survivability than the multiple-shelter scheme, given adequate warning of a Russian attack. This weapons system could consist of some 200 aircraft, each carrying a single missile with be-

tween six and eight warheads. The planes could be deployed at about 100 bases, but they could be dispersed and moved at random among several thousand small airfields available around the country.

On warning of a massive launch, say, of Russian SLBM's (submarine-launched ballistic missiles) the aircraft could escape to additional thousands of predetermined sites on the federal highway network, making the pre-emptive targeting of all possible landing sites for the aircraft impossible.

Mobile ICBMs carried by STOL aircraft offer several military advantages over a tunnel-based or multiple-shelter MX system. Their mobility guarantees high survivability, even in the case of an all-out barrage of SLBMs, whose firing from offshore sites would allow a much shorter warning and reaction time than an ICBM attack would.

The missiles on board the aircraft would not have to fire toward their targets immediately on take-off. Although the missile that might have to be used would carry no more than eight MIRVs, its accuracy could be as high as that of a shelter-based missile.

Finally, since an airborne system would be truly mobile, it would not tempt an enemy to acquire an unlimited number of warheads in the hope of making it vulnerable.

Therefore the survivability of this system would depend neither on Russian adherence to agreed-on numerical ceilings on missiles and warheads nor on the outcome of future SALT negotiations.

Certainly a decade and perhaps more, however, would be necessary to develop, test and deploy such a system. Furthermore, in times of crisis hundreds of nuclear weapons would be circulating in the air over the country and would be moved from airfield to airfield with little physical security, exposing the weapons both to accidents and to possible sabotage. Moreover, the system would require an extensive and well orchestrated (therefore often rehearsed) support

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network that could prove both expensive and awkward.

Another alternative, proposed in Congressional testimony, would involve small submarines that could carry a few missiles each; the submarines would loiter over the continental shelf. Since the total area of the ocean over the U.S. continental shelf is some 400,000 square miles, a saturation attack against such vehicles is practically impossible.

The submersibles could be counted by national technical means of verification (satellites, for example) and, therefore, would not present any arms-limitation difficulties or open the way for unpleasant military surprises, such as a sudden abrogation of the SALT II treaty by the U.S.S.R., a move induced by the inability to verify the numbers of U.S. weapons.

Their survivability would not depend on any warning and would not be threatened by preemptive attack or by any Russian anti-submarine warfare activities, since they would be deployed in seas firmly controlled by U.S. surface ships and submarines.

Although at any one time some of the submersibles would be in port for crew changes and maintenance (and therefore vulnerable to a surprise Russian attack), the short distances the small submersibles would have to travel to reach their battle stations would make it possible to have about 80 per cent of them on station at any given time. The accuracy of the missiles launched from such a system could be guaranteed to be as good as that of land-launched ICBMs.

Such a submarine system, however, shares with the air-mobile system and the multiple-shelter mode the disadvantage of unavailability for many years.

In any event, the United States need not rush into a new land-based ICBM system out of fear of the immediate vulnerability of the Minuteman ICBM force.

Alarmist public descriptions of this vulnerability are exaggerated and misleading because

they ignore the inherent uncertainties of a force-wide attack and they are based on the assumption of a strategic scenario that is implausible on both political and military grounds.

Our own view is that the most probable outcome of even a concerted Russian attack on the U.S. ICBM silos during the late 1980s would be the survival of a significant fraction of the Minuteman force.

More important, the land-based Minuteman force carries only about a third of the total equivalent megatonnage of the U.S. nuclear strategic arsenal; the other two-thirds is carried by the SLBM force and the long-range bomber force.

Since only a small fraction of the total U.S. equivalent megatonnage is assigned to industrial and other economic targets in the U.S.S.R. as a part of the strategy of deterrence, even if in the course of an unexpectedly successful Russian attack the United States was deprived of *all* of its land-based ICBMs, it would still be left with about half of its strategic nuclear force available for retaliatory attacks against Russian military targets.

Indeed, the installation of local silo defenses, after prior discussions with the U.S.S.R., would be preferable to the MX. The defenses would increase the security of the Minuteman force, decrease crisis instability and minimize still further the probability of a large-scale counterforce nuclear exchange.

In such a strategic environment, the United States and the Soviet Union could then attempt in future SALT negotiations to return as far as possible to the "good old days" of unMIRVed ICBMs and perhaps even go beyond that.

If, on the other hand, such negotiations were to appear unpromising, the United States would still have plenty of time to develop other strategic systems that would offer a better solution to the problem of Minuteman vulnerability than the land-based MX does.

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